

KONTOROVICH, I.Ye., doktor tekhn. nauk; KOLESNIKOV, A.P., inzh.;
TAMARINA, A.M., inzh.; TKACHENKO, V.I., inzh.; TSERLYUK, M.D., inzh.

Increasing engineering properties of steel castings at low
temperatures. Stroi. i dor. mash. 10 no.4:32-33 Ap '65.

(MIRA 18:5)

TRACHENKO, V. K.

USSR.

Desilication of water by means of caustic magnesite.
V. K. Trachenko, L. A. Chernova, and G. K. Shuryshkina.
Elek. Stantsii 22, No. 12, 20-8(1951).—MgO, obtained by
calcination of magnesite, is used to decrease the silica con-
tent of boiler feed water; the optimum dose is 5-7 mg.
MgO to 1 mg. SiO_2 , and there must be not less than 3 g./l.
of lime (alkalis). The time of interaction of the MgO and
water should be not less than 2 hrs. V. H. Gottschalk

SOLOREVA, S.A.; TKACHENKO, V.K. (Kiyev)

Vasilii Dmitrievich Shervinskii. Vrach.delo no.3:323-324 Mr
'60. (MIRA 13:6)

(SHERVINSKII, VASILII DMITRIEVICH, 1850-1941)

Translation from: Referativnyy zhurnal, Metallurgiya, 1960, No. 9, p. 109.
20243

S/137/60/000/009/005/029
A006/A001

AUTHORS: Kirillov, B.S., Gorenshteyn, M.M., Goltvenko, A.I., Tkachenko, V.K.

TITLE: Calculation of the Multi-Purpose Spindle of a Rolling Mill

PERIODICAL: Sb. nauchn. tr. Zhdanovsk. metallurg. in-t, 1960, No. 5, pp. 372-381

TEXT: A comparison is made of the existing methods for calculating multi-purpose spindles of a rolling mill. The magnitudes of error when using one or the other method were revealed. As a result of the study it was established that the discrepancy between the theoretical calculations of a spindle fork and experimental data is explained by the inaccurate accounting for the twisting stress. A.I. Tselikov recommends to use the method of the strength of materials applied to the given case when calculating bore rolls. When calculating the blades of a roll, new coefficients are introduced which can be used as a basis of approximate calculations.

Translator's note: This is the full translation of the original Russian abstract.
Card 1/1

K.U.

PESHKOV, V.P.; TKACHENKO, V.K.

Kinetics of the disturbance of superfluidity in helium. Zhur.
eksp. i teor. fiz. 41 no.5:1427-1432 N 61. (MIRA 14:12)

1. Institut fizicheskikh problem AN SSSR.
(Superfluidity) (Helium)

TKACHENKO, V.K.

Vortex lattices. Zhur.eksp. i teor.fiz. 49 no.6:1875-1883
D '65. (MIRA 19:1)

1. Submitted July 2, 1965.

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 11, p 75 (USSR) SOV/137-58-11-22369

AUTHORS: Kirillov, B. S., Gorenshteyn, M. M., Tkachenko, V. K., Goltvenko, A. I.

TITLE: An Investigation of Dynamic Processes in the Live Train of an 1170 Blooming Mill Under More Severe Conditions of Rolling (Issledovaniye dinamicheskikh protsessov v rabochey linii blyuminga 1170 pri uzhestochennom rezhime prokatki)

PERIODICAL: Izv. vyssh. uchebn. zavedeniy. Chernaya metallurgiya, 1958, Nr 1, pp 128-137

ABSTRACT: An investigation is made of dynamic processes in the live train of a blooming mill (B) by comparing regimes for rolling 6.9-t steel ingots in 13 and 11 passes. The results serve as reference material for dynamic stress analyses relating the more intensive B rolling operations. The analytical and experimental investigations include derivation of the magnitudes of the static, motive, and dynamic moments at different phases of the passage of the metal (Me) through the rolls. The static and motive moments in the period of Me contact display a linear change and may be deemed constant when a steady-state process is in progress. The dynamic moments are investigated

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An Investigation of Dynamic Processes in the Live Train (cont.) SOV/137-58-11-22369

by means of the equation for the moment of the elastic forces of the spindle induced by the inertia of the flywheel masses in the live train of the mill during the contact phase and the steady rolling process. The effect of the law governing the increase in and the value of the moment of resistance during contact upon change in the dynamics of the process is demonstrated. Dynamic phenomena are virtually equal upon rolling in 13 and in 11 passes. The fluctuations in the torque moments induced by the elasticity of the system do not exceed 3% of the static load.

V. I.

Card 2/2

TKACHENKO, V.K.

Ancient glaciation in the upper reaches of the Kara-Say and
Koyandy Valleys. Rab. Tian'-Shan'. vysokogor. fiz.-geog. sta.
no.6:29-34 '64. (MIRA 17:12)

GORENSHTEYN, M.M., kand.tekhn.nauk; KIRILLOV, B.S., kand.tekhn.nauk;
TKACHENKO, V.K., inzh.; GOLTVENKO, A.I., inzh.; POGORZHEL'SKIY,
V.I., inzh.; BARANETS, P.D., inzh.; YASHCHENKO, Z.A., inzh.;
FIL'CHAKOVA, V.A., inzh.

Establishing the most satisfactory conditions for rolling on
blooming mills with increased load on the main driving motor.
Izv. vys. ucheb. zav.; chern. met. no.3:91-101 Mr '58.

(MIRA 11:5)

1.Zhdanovskiy metallurgicheskiy institut i zavod "Azovstal'".
(Rolling mills--Electric driving)

TKACHENKO, V.K., inzhener.

Simplified scheme for demineralization of water. Teploenergetika
4 no.9:51-54 S '57. (MIRA 10:8)

1. Moskovskoye rayonnoye upravleniye energokhozyaystva.
(Feed-water purification)

TKACHENKO, V.K.

USSR/Chemical Technology - Chemical Products and Their
Application. Water treatment. Sewage water.

I-11

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 12729

Author : Tkachenko V.K.

Inst : Moscow Power Installations

Title : Experience with Operation of Dual-Flow Mechanical Filters

Orig Pub : Inform. materialy Mosenergo, 1955, No 8, 53-55

Abstract : Description of changes in design which have been made in standard clarifying filters of the pressure type (diameter 3 meters) in order to operate them according to a system of dual-flow filtration. Operation with non-coagulated water has revealed the possibility of increasing the output capacity of the filters by 2 times and that of mud holding capacity by 3-4 times. The filters were washed with unfiltered water. During the period of high waters, on operation with non-coagulated water, the output of each filter was decreased, down to 10 m³/hour,

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USSR/Chemical Technology - Chemical Products and Their
Application. Water Treatment. Sewage Water.

I-11

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 12729

while on resorting to coagulation it rose to 50-60
m³/hour.

Card 2/2

- 156 -

TRACH MEQ, V. K., Eng.

Plastering

Nozzle for plastering surfaces with lime solution with dry gypsum. *izv.*
stroit. tekhn. 10, No. 5, 1953.

Monthly List of Russian Accessions, Library of Congress, June 1953. Uncl.

PESHKOV, V. P. and TRACHENKO, V. K.

"Critical velocities in capillary tubes and quantized vortices"

report to be submitted for the 8th Intl. Conf. on Low Temperature Physics (IUTAP)
London, England, 16-22 Sep 62.

RYABTSEV, L.N.; KARPETA, D.I.; MOREV, I.I.; RAYEV, Yu.O.; KLOKOV, P.V.;
ZHEMBUS, M.D.; YEVSEYEV, A.M.; TKACHENKO, V.K.

Young blast furnace operators are exchanging work practices. Metallurg no.12:7-10 D '56. (MIRA 10:1)

1. Master domennoy pechi no.7 Magnitogorskogo metallurgicheskogo kombinata (for Ryabtsev). 2. Master domennoy pechi no.7 Magnitogorskogo metallurgicheskogo kombinata (for Karpeta). 3. Master Magnitogorskogo metallurgicheskogo kombinata (for Morev). 4. Pomoshchnik mastera Kuznetskogo metallurgicheskogo kombinata (for Rayev). 5. Master metallurgicheskogo zavoda imeni Serova (for Klovov). 6. Master metallurgicheskogo zavoda imeni Petrovskogo (for Zhembus). 7. Master Chusovskogo metallurgicheskogo zavoda (for Yevseyev). 8. Master Makeyevskogo metallurgicheskogo zavoda (for Tkachenko).

(Magnitogorsk--Blast furnaces)

TKACHENKO, V.K.; FILIMONOV, A.I.

Gasifier for obtaining pressures up to 100 atmospheres by means
of liquid helium. Prib.i tekhn.eksp. 6 no.5:203-204 S-● '61.
(MIRA 14:10)

1. Institut fizicheskikh problem AN SSSR.
(High-pressure research--Equipment and supplies)

26697
S/006/61/041/005/012/038
B109/B102

24.5600

AUTHORS: Peshkov, V. P., Tkachenko, V. K.

TITLE: Kinetics of the destruction of superfluidity in helium

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 41, no. 5(11), 1961, 1427 - 1432

TEXT: In continuation of studies carried out by P. L. Kapitsa (ZhETF, 11, 581, 1941), L. D. Landau (ZhETF, 11, 591, 1941) and at the Institut fizicheskikh problem (Institute of Physical Problems) by V. Markov and Tkachenko, the authors investigated the heat transfer along a capillary tube. The measuring arrangement in essential consisted of a spiral capillary tube of 1.4 mm diameter and 8 m length, placed in a vacuum container of 70 mm diameter and 170 mm length. The upper end of the capillary tube was connected to a helium vessel, the lower was surrounded by a heater coil. 12 phosphor-bronze thermometers (R_i) with a measuring current of 0.2 ma are mounted on the capillary tube. For $T = 1.34^\circ\text{K}$ and a heat flux of $W = 4.4 \cdot 10^{-2} \text{ w/cm}^2 = 1.19 W_{\text{crit}}$, Fig. 3 renders the time

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S/056/61/041/005/012/038
B109/B102

Kinetics of the destruction...

dependence of the thermometer temperature. Between 1.3 - 1.4°K the thermometer resistance was $\sim 15 - 20$ ohms. It was found that a turbulence front moves with constant velocity $v_T = 2.2 \pm 0.1$ mm/sec from the heated end to the cold end of the tube. This front increases the thermal resistance of the helium. On the other hand, a front with the constant velocity $v_x = 1 \pm 0.03$ mm/sec propagates from the cold end of the tube.

Fig. 4 shows the velocity of the fronts as functions of the heat flux densities at $T = 1.34^\circ\text{K}$. For $W_{\text{crit}} = 3.7 \cdot 10^{-2} \pm 0.1 \cdot 10^{-2}$ w/cm² which the authors estimate to occur at $v_n = 1.85$ cm/sec and $v_s = 0.114$ cm/sec, v_T and v_x practically turn zero. Pretreatment of the helium has a considerable effect upon the turbulence. Turbulence occurs at the ends of the capillary tube but may arise also inside the tube at a subcritical heat flux if the settling time of the helium before the application of the heat flux was too short. A. N. Vetchinkin (PTE, 1, 192, 1961) is mentioned. There are 8 figures and 10 references: 4 Soviet and 6 non-Soviet. The four most recent references to English-language publications read as

Card 2/4

Kinetics of the destruction...

26697

S/056/61/041/005/C12/038
B109/B102

follows: L. Onsager. Nuovo Cim., 6, Suppl., 2, 249, 1949; W. F. Vinen. Proc. Roy. Soc., A240, 114, 128, 1957; R. P. Feynman. Progr. in low temp. phys., 1, Amsterdam, 1955; K. R. Atkins. Liquid helium, Cambridge, 1959.

ASSOCIATION: Institut fizicheskikh problem Akademii nauk SSSR (Institute for Physical Problems of the Academy of Sciences USSR) ✓

SUBMITTED: June 7, 1961

Card 3/4

TKACHENKO, V.K.

Development of turbulence during heat flow in Helium II in a capillary tube, and the critical velocity problem. Zhur. eksp. i teor. fiz. 45 no.6:1827-1834 D '63. (MIRA 17:2)

1. Institut fizicheskikh problem AN SSSR.

ACCESSION NR: AP4009102

S/0056/63/045/006/1827/1834

AUTHOR: Tkachenko, V. K.

TITLE: Development of turbulence during heat flow of He II in a capillary tube and the critical velocity problem

SOURCE: Zhurnal eksper. i teoret. fiziki, v. 45, no. 6, 1963, 1827-1834

TOPIC TAGS: Helium II, superfluidity, vortex formation, Feynman-Onsager vortex, quantum liquid, superfluid turbulence flow, critical flow velocity

ABSTRACT: In a paper by V. P. Peshkov and the author (ZhETF, v. 41, 1427, 1961) it was shown that the laminar flow of the normal component can interact with the vortical flow of the superfluid component and this type of heat transport flow is such that the boundary separating the two regions (the superfluid turbulence front) moves and

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its velocity depends on the critical flow velocity. To check the nature of this critical velocity measurements on helium II in capillary tubes 0.4 and 1.3 mm in diameter at different temperatures. Turbulence fronts were observed at temperatures 0.8--1.5K. The experiment and the apparatus were analogous to those in the cited paper by Peshkov and the author. The various experiments have shown that laminar flow is possible at velocities exceeding what it is customarily defined as critical. A typical variation of the hot and cold fronts with the heat flow is shown in the figure and it is argued that the critical heat flow should be defined as the one for which the velocity of the cold front is equal to zero. Some theoretical estimates for the value of the critical velocity and for the factors causing turbulence in the liquid are presented. "The author is grateful to Prof. V. P. Peshkov for suggesting the problem and for numerous discussions concerning both the experimental data and the conclusions. He also thanks Prof. I. M. Khalatnikov and Prof. L. A. Vaynshteyn whose comments helped clarify a

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ACCESSION NR: AP4009102

number of theoretical problems." Orig. art. has: 10 figures and 6 formulas.

ASSOCIATION: Institut fizicheskikh problem AN SSSR (Institute of Physics Problems AN SSSR)

SUBMITTED: 18Jun63

DATE ACQ: 02Feb64

ENCL: 01

SUB CODE: PH

NO REF SOV: 003

OTHER: 009

Card

3/4

L 41740-66 EWT(m)/T/EWT(t)/ETI IJP(c) JD
 ACC NR: AP6020213 SOURCE CODE: UR/0056/66/050/006/1573/1585
 75
 72

AUTHOR: Tkachenko, V. K.

ORG: Institute of Solid State Physics, Academy of Sciences, SSSR (Institut fiziki tverdogo tela Akademii nauk SSSR)

TITLE: Stability of vortex lattices

SOURCE: Zh eksper i teor fiz, v. 50, no. 6, 1966, 1573-1585

TOPIC TAGS: vortex, lattice, quantum liquid, liquid helium, motion stability, superconductivity, superfluidity

ABSTRACT: In view of the revival of interest in discrete vortices in ideal liquids, especially in connection with liquid helium, screw dislocations, and similar phenomena, the author investigates the behavior of small perturbations of simple vortex lattices in helium and their effect on the stability of the liquid. The problem is transformed to two-dimensional form and reduces to a study of the stability of rotation of a system of vortices as a unit. To avoid difficulties connected with the Earnshaw theorem, stability is defined not in connection with a minimum of the energy of the system, but in connection with the question whether a sufficiently small perturbation of the motion will remain small in the course of time. From a study of the equations of motion it is deduced that a triangular lattice over a near-triangular lattice remains stable. The law of dispersion for the lattice vibrations is determined, and the form of the normal vibrations is calculated. In the long-wave limit

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L 41740-66

ACC NR: AP6020213

these vibrations recall sound vibrations in crystals. The long-wave oscillations are not determined by the density of the vortices, but depend on the structure of the lattice and are anisotropic in all but triangular lattices. Lattices other than triangular are absolutely unstable. The experimental feasibility of observation of vortex lattices in rotating helium is not discussed. It is pointed out in conclusion that the results are applicable not to helium alone, since they contain the dispersion law for a plane lattice with a screened Coulomb interaction. In the case of necessity the methods developed in the article can be used to investigate complex lattices or lattices with defects. The author thanks S. V. Iordanskiy for pointing out the feasibility of the calculations and L. P. Pitayevskiy for interest in the work and for a discussion. The work was stimulated by the symposia at Bakuriani on superconductivity and superfluidity, and the author is extremely grateful to their organizers. Orig. art. has: 45 formulas.

SUB CODE: 20/ SUBM DATE: 04Jan66/ ORIG REF: 015/ OTH REF: 003

Card 2/2 20

1. TKACHENKO, VL.
2. USSR (600)
4. Danube-Black Sea Canal
7. Canal lifeline. Vokrug sveta no. 10, 1952

9. Monthly List of Russian Accessions, Library of Congress, January 1953, Unclassified.

ANDREYEV, N.K.; BLYUDZE, Yu.G.; DOKUCHAYEV, O.N.; PETROVSKY, V.S.;
SMOLYAKOV, A.V.; TKACHENKO, V.M. (Leningrad)

"Study of the main properties of pseudo-sound sources of turbulent noise".

report presented at the 2nd All-Union Congress on Theoretical and Applied
Mechanics, Moscow, 29 January - 5 February 1964

ACC NR: AP6033855

(N)

SOURCE CODE: UR/0281/66/000/004/0076/0080

AUTHOR: Levitov, V. I. (Moscow); Tkachenko, V. M. (Moscow)

ORG: none

TITLE: Effect of corona discharge electrode shape on drift velocity of aerosol particles in an electrostatic precipitator

SOURCE: AN SSSR. Izvestiya. Energetika i transport, . 4, 1966, 76-80

TOPIC TAGS: electrostatic precipitation, aerosol, corona discharge

ABSTRACT: A method is presented for the stroboscopic photographic investigation of trajectories and drift velocities of aerosol particles, as applied to conditions of corona discharge in electrostatic precipitators. The investigations were carried out using an electrostatic precipitator model consisting of two plane precipitating electrodes and one corona discharge electrode placed along the longitudinal axis of the chamber. Two walls of the chamber contained glass for the transmission of light. The light source consisted of an incandescent movie projector bulb. By using a slit diaphragm, the chamber was illuminated only by a long narrow beam normal to the precipitator electrodes and coinciding in direction with the central electrical field lines of force along the operating length of the corona discharge electrode. The light reflected by aerosol particles was interrupted by means of a disc chopper mounted directly in

UDC: 621.359.482.015 532

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ACC NR: AP6033855

front of the camera lens and driven by an electric motor. The aerosol was produced using lycopodium powder with 80% of the particles having a diameter from 10 to 20 μ . The corona discharge electrodes consisted of a cylindrical wire with a diameter of 0.3 and 0.9 mm and also of a needle electrode with needle height of 13.5 mm and a distance of 11 mm between needles. The investigations showed that needle electrodes possess better electrical characteristics and make it possible to increase the value of aerosol particle drift velocities in the direction towards the precipitator electrodes. For this reason the application of needle corona discharge electrodes and electrostatic precipitators must be looked upon as one promising method for intensifying the process of electrostatic gas purification. Orig. art. has: 4 figures.

SUB CODE: 13/

SUBM DATE: 21Apr66/

ORIG REF: 003/

OTH REF: 002

Card 2/2

KOSTIN, V.N.; TRACHENKO, V.M.

Effect of a constant magnetic field on a stationary corona discharge. Zhur. tekhn. fiz. 34 no.5:883-887 My'64 (MIRA 17:8)

1. Khar'kovskiy gosudarstvennyy univetsitet imeni Gor'kogo.

KOSTIN, V.N.; TKACHENKO, V.M.

Effect of a constant magnetic field on a stationary corona
discharge. Zhur. tekhn. fiz. 34 no.7:1252-1258 JI '64
(MIRA 17:8)

1. Khar'kovskiy gosudarstvennyy universitet imeni Gor'kogo.

L 22209000

EPP(11)-2/FWI(1)/E16(1)/EWE(2) LSP(1) A7

ACC NR: ARG005183

SOURCE CODE: UR/0058/65/000/009/G016/G016

SOURCE: Ref. zh. Fizika, Abs. 96130

AUTHORS: Nekrashevich, I. G.; Tkachenko, V. M.; Urenev, V. I.

TITLE: Time scanning of the process of condensation of matter from a plasma cloud in a condensed discharge

REF SOURCE: Tr. Komis. po spektroskopii. AN SSSR, vyp. 1, 544-550

TOPIC TAGS: electric discharge, discharge plasma, vapor condensation, electrode

TRANSLATION: The scanning method is used to study the process of emission of matter from electrodes in a condensed discharge, and particularly the change of the composition of the emitting vapor with time. Important experimental data are obtained on the kinetics of formation of the vapor cloud of the electrode material.

SUB CODE: 20

Card 1/1 nst

ACCESSION NR: AP4035701

S/0057/64/034/005/0883/0887

AUTHOR: Kostin, V.N.; Tkachenko, V.M.

TITLE: The influence of a static magnetic field on a stationary corona discharge

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.5, 1964, 883-887

TOPIC TAGS: magnetic field, corona discharge, plasma

ABSTRACT: Current-voltage characteristics and potential distributions were measured for stationary corona discharges between a 0.1 mm diameter tungsten wire and a 23 mm diameter 95 mm long coaxial brass cylinder, in the presence and absence of a 500 Oe longitudinal magnetic field. The current-voltage relations were measured with a microammeter and an electrostatic voltmeter, and also with an oscilloscope. The potential distributions were determined from the characteristics of a molybdenum probe 1 mm in diameter and 50 mm long which was mounted parallel to the axis of the cylinder and could be moved radially. The mobility of the positive ions was also determined, both from the current-voltage characteristic with the aid of Townsend's formula and by a pulse method in which the ion transit time was measured with the oscilloscope. The application of the 500 Oe magnetic field to a positive corona

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ACCESSION NR: AP4035701

discharge in hydrogen at 20 mm Hg was found to shift the current-voltage characteristic by about six volts toward lower voltages. At higher pressures the shift was smaller. The characteristic of a negative corona discharge was shifted in the opposite direction by about the same amount. The electric potential in the inter-electrode region increased when the magnetic field was applied, indicating an increase of the space charge density. A calculation of the potential in the absence of the magnetic field based on a theory published by V.I. Popkov (Otkhety* laboratorii NIO-GAZ trosta Gazoochistka, 1935 and 1936) gave values about 20% below the experimental points. This discrepancy is ascribed both to experimental error and theoretical inadequacy. Application of the magnetic field reduced the ion mobility by several percent. The ion mobility in the presence of a magnetic field is calculated from the equations of motion, and it is found that the magnetic field should indeed reduce the mobility by about the observed amount. "I express my gratitude to V.I. Popkov for valuable advice relating to the choice of methods of measurement." Orig.art. has: 13 formulas and 6 figures.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet im.A.M.Gorkogo (Khar'kov State University)

SUBMITTED: 20Aug82

DATE ACQ: 20May84

ENCL: 00

SUB CODE: EM

NR REF SOV: 006

OTHER: 001

Card 2/2

ACCESSION NR: AP4042001

8/0057/64/034/007/1252/1258

AUTHOR: Kostin, V.N.; Tkachenko, V.M.

TITLE: Concerning the influence of a constant magnetic field on a stationary corona discharge

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.7, 1964, 1252-1258

TOPIC TAGS: corona discharge, electric discharge, magnetic field, argon, air, hydrogen

ABSTRACT: As a continuation of earlier work of the authors (ZhTF 34, No.5, 1964), the effect of a magnetic field on a direct current corona discharge between coaxial cylindrical electrodes in hydrogen, argon and air was investigated at pressures from 1 to 70 mm Hg. The discharge took place between a copper cylinder 16, 21 or 27 mm in diameter and 30 or 100 mm long and an 0.1 mm diameter tungsten wire coaxial with it. In some experiments the outer cylindrical electrodes were provided with guard electrodes to eliminate end effects. The magnetic field (up to 2300 Oe) was applied parallel to the axis of the electrodes. The application of a magnetic field to a positive corona in any of the three gases investigated reduced the voltage re-

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ACCESSION NR: AP4042001

quired to maintain a fixed discharge current. The effect of the field on a negative corona was of the opposite sign, but difficulties were experienced with the measurements because of instability of the negative corona. The voltage shift decreased with increasing pressure and discharge current. The negative voltage shift for the positive corona discharge in hydrogen was 40 V at 9 mm Hg and 1400 Oe. The positive shift for the negative corona was somewhat smaller. In air, the negative voltage shift for the positive corona was very small and could be observed only by measuring the change in current at fixed voltage. The positive shift for the negative corona was greater in air than in hydrogen. Both shifts were small in argon. The effect of a 1400 Oe magnetic field on the positive corona in an argon-alcohol mixture such as is used in self-quenching counters was examined at approximately 150 mm Hg. Here the shift was of the opposite sign (positive) to that in the pure gases, and large (100 V). Ion mobilities were calculated with Townsend's formula, and a brief theoretical discussion of the phenomena is given. It is concluded that the increase of current with increasing magnetic field in a positive corona is due to increased ionization by the electrons, and that the decrease of current in a negative corona is due to the decreased electron mobility, which in this case outweighs the increase in the ionization. "In conclusion, we express our gratitude to V.I. Popkov, Corres-

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Card

ACCESSION NR: AP4042001

ponding Member of the Academy of Sciences of the SSSR, for valuable advice, which was heeded in the performance of this work." Orig.art.has: 11 formulas and 7 figures.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet im.A.M.Gorkogo (Kharkov State University)

SUBMITTED: 22Jul63

ENCL: 00

SUB CODE: EM, NP

NR REF SOV: 005

OTHER: 003

3/3

L 01066-67

ACC NR: AP6008138

SOURCE CODE: UR/0281/66/000/001/0161/0166

AUTHOR: Levitov, V. I. (Moscow); Tkachenko, V. M. (Moscow)

ORG: none

TITLE: Problem of maximum electric parameters of electric precipitators

SOURCE: AN SSSR. Izvestiya. Energetika i transport, no. 1, 1966, 161-166

TOPIC TAGS: electrostatic precipitation, air pollution

ABSTRACT: The results are reported of an experimental investigation of electric breakdown of air between these corona-displaying electrodes: (negative) wire-plate, wire between two parallel plates, and coaxial cylinders. Plots of average breakdown voltage vs. wire diameter, for various wire-plate distances, are shown. Two regions are observable: (1) In the first region, the breakdown voltage is independent of the wire diameter; (2) In the second region, with large wire diameters, the breakdown voltage decreases as the wire diameter increases. Voltages up to 180 kv were used. If the fringe effect is eliminated, the breakdown voltage, in the first region, is proportional to the gap length; in other words, the breakdown of a corona gap takes

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UDC: 621.359.484

L 01066-67

ACC NR: AP6008138

place at a certain maximum (about 20 kv/cm) gradient. In practical terms, a 3-mm diameter or thinner wire would have to be recommended for electrostatic precipitators if the maximum field strength is to be used; however, such a thin wire is unacceptable because of its low mechanical strength. Hence, the problem of designing an efficient mechanically strong precipitator remains open. Orig. art. has: 5 figures and 5 formulas.

SUB CODE: 13, 09 / SUBM DATE: 22Oct65 / ORIG REF: 003 / OTH REF: 001

Card 2/2 vlr

S/120/62/000/001/043/061
E192/E382

7.4160

AUTHORS: Kostin, V.N. and Tkachenko, V.M.

TITLE: Operation of photo-cells under pulsed conditions

PERIODICAL: Pribery i tekhnika eksperimenta, no. 1, 1962,
173 - 176

TEXT: The operation of gas-filled photo-cells under pulsed conditions offers new possibilities in photo-electronic automation systems. The pulsed operating regime has therefore been investigated in detail by employing argon-filled photo-cells, type ЦГ-4 (TsG-4), with O-Cs cathodes and vacuum photo-cells, ЦУБ-4 (STsV-4), with Sb-Cs cathodes (manufactured at Moskovskiy elektrozavod (Moscow Electrical Works)). The spectral characteristics of these cells extend over the visible range so that a 6 V battery-fed lamp was used as the illumination source. The intensity of the illumination was controlled by varying the current. The cell and the lamp were enclosed in a special envelope to eliminate the outside radiation of the cell. The cell was connected to an amplifier head (type БГС (BGS)) through

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Operation of photo-cells

S/120/62/000/001/043/061
E192/E382

a spark gap consisting of a plate and a point. The width of the spark gap could be varied and measured with an error of ± 0.005 mm since the point was mounted on a micrometer screw. The plate was in the form of a solid metal slab. The basic circuit for the investigation is illustrated in Fig. 2, where $M7$ is the spark gap. The positive terminal of a high-voltage stabilized supply source was connected to the cell through the spark gap and a quenching resistor of $2\text{ M}\Omega$. The negative terminal of the supply source and the cathode of the photo-cell were grounded. The pulses produced in the circuit were applied to the first amplifier tube through a coupling condenser of 47 pF . The amplifier head was connected to a counter by means of a screened cable. The operation of the photo-cells was investigated by measuring their electrical and photometric characteristics. It is concluded from the investigation that:

- 1) the number-of-pulses versus voltage characteristics of the photo-cells under pulsed conditions are qualitatively comparable with the voltage-current characteristics under normal DC

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Operation of photo-cells

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conditions;

2) the photo-cells can be used photometrically under pulsed conditions since the number of output pulses is linearly dependent on the illumination;

3) the absolute sensitivity under pulsed conditions is comparable with that of the DC operation but the threshold sensitivity is at least 20 times higher;

4) the pulsed operation has the advantage of the absence of dark currents, a high pulsed voltage, possibility of a direct telemetry transmission and a high breakdown voltage.

There are 7 figures.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet ..
(Khar'kov State University)

SUBMITTED: June 30, 1961

Card 3/4

ACCESSION NR: AP4017599

S/0109/64/009/002/0293/0299

AUTHOR: Tkachenko, V. M.; Kostin, V. N.; Belous, V. V.

TITLE: Effect of a high-frequency electric field on the glow discharge

SOURCE: Radiotekhnika i elektronika, v. 9, no. 2, 1964, 293-299

TOPIC TAGS: glow discharge, glow discharge column, glow discharge column compression, hf glow discharge column compression, glow discharge in air, glow discharge in hydrogen, glow discharge in deuterium

ABSTRACT: A theoretico-experimental investigation of the effect of an axially-symmetric h-f field produced by a set of rings on the glow discharge for various field frequencies, discharge currents, gases, and gas pressures is reported. A formula is developed for the diameter of the compressed-discharge column which depends on the field frequency, electron temperature, discharge-tube radius, and the frequency of collisions between ions and gas molecules (i.e., ion temperature

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ACCESSION NR: AP4017599

and gas pressure). Experiments conducted with a 40-cm-long 3-cm-diameter gas-discharge tube supplied with a d-c 0-6-kv voltage and equipped with a movable (0-300 v) inside probe and 5 outside rings (10-230-kc) corroborated the validity of the formula. The variation of ion and electron currents, space potential, temperature and concentration of electrons depending on the h-f field were determined from the probe characteristics. Air, hydrogen, and deuterium at 0.1-4 torr were tested. Orig. art. has: 4 figures and 17 formulas.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet (Khar'kov State University)

SUBMITTED: 01Dec62

DATE ACQ: 18Mar64

ENCL: 00

SUB CODE: GE, PH

NO REF SOV: 008

OTHER: 000

Card 2/2

TKACHENKO, V. N.

New types of electrodrainage and methods for calculating them.
Ispol'. gaza v nar. khoz. no.2:167-178 '63. (MIRA 18:9)

1. Laboratoriya avtomatizatsii i telemekhanizatsii Saratovskogo
gosudarstvennogo nauchno-issledovatel'skogo i proyektnogo
instituta po ispol'zovaniyu gaza v narodnom khozyaystve.

TKACHENKO, V.N.

Unit for modeling practical problems concerning the cathodic protection of underground metal structures from eddy currents. Gaz. delo no.5423-27 '65.
(MIRA 18:6)

1. Saratovskiy gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut po ispol'zovaniyu gaza v narodnom khozyaystva.

TRACHENKO, V.N., podpolkovnik meditsirskoy sluzhby.

Consecutive treatment of patients with a military unit.
Voen.-med. zhurn. 1967/1 36 166 (MIA 19:2)

TKACHENKO, V.N.

Modeling the system of the ~~"track-network-ground-network"~~ of
underground structures." Gaz. delo no.6:24-28 '64.

(MIRA 17:8)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy
institut po ispol'zovaniyu gaza v narodnom khozyaystve.

ACCESSION NR: AR3000144

S/0272/63/000/005/0130/0130

SOURCE: RZh. Metrologiya i izmeritel'naya tekhnika, Abs. 5.32.831

AUTHOR: Tkachenko, V. N.; Budilenko, L. F.

TITLE: High-power electrical drainage utilizing semiconductors

CITED SOURCE: Gaz. prom-st', no. 7, 1962, 46-47

TOPIC TAGS: electrical drainage; semiconductors; silicon valves.

TRANSLATION: A communication concerning experimental units, developed by GipronIIGaz and built by the Saratov "Gazpribor" plant, of a high-power drainage utilizing silicon rectifiers. The drainage system is designed for a rated current of 500 amperes and permissible short-duration overloads of up to 800 amperes; the permissible back voltage is 100 volts. The drainage has undergone successful operation trials. Orig. art. has

Card 1/2

ACCESSION NR: AR3000144

3 illustrations

DATE ACQ: 21May63

ENCL: 00

SUB CODE: 00

Card 2/2

KOSTIN, V.N.; TKACHENKO, V.M.

Performance of photoelectric cells under pulsed conditions.
Prib.i tekhn.eksp. 7 no.1:173-176 Ja-F '62. (MIRA 15:3)

1. Khar'kovskiy gosudarstvennyy universitet.
(Photoelectric cells)

TKACHENKO, V.N.; BUDILENKO, L.F.

Powerful electric drainage with semiconductors. Gaz. pro. 7 no.2:
46-47 '62. (MIRA 17:10)

TKACHENKO, V.M.; KOSTIN, V.N.; BELOUS, V.V.

Effect of a high-frequency electric field on a glow-discharge.
Radiotekh. i elektron. 9 no.2:293-299 F '64. (MIRA 17:3)

1. Radiofizicheskiy fakul'tet Khar'kovskogo gosudarstvennogo
universiteta im. A.M.Gor'kogo.

TKACHENKO, V.N.; BUKAYEV, V.P.; RODIONOV, B.G.

Experience in planning the joint electric corrosion protection
of urban underground metallic installations. Gaz.prom. 6
no.8:43-46 '61.

(MIRA 14:10)

(Pipelines--Cathodic protection)

TKACHENKO, V.H.

Cementing plates of press molds. Ogneupory 26 no.1:43-44 '61.
(MIPA 14:2)

1. Pervoural'skiy dinasovy/ zavod.
(Cementation (Metallurgy))

TKACHENKO, V. N.

"Tubes for Quartz-Mercury-Arc Lamps Used for Irradiating Palatine Tonsils".

Voyenno Meditsinskiy Zhurnal, No. 4, 1962

TKACHENKO, V.N., mayor meditsinskoy sluzhby

Condition of the auditory and vestibular analyzers of radar station
operators. Voen.-med. zhur. no.6:74 Je '61. (MIRA 14:3)
(EAR--DISEASES) (RADAR OPERATORS)

TRACHENKO, V. N. (Major of the Medical Service)

"The Condition of the Auditory and Vestibular Analyzers in Radar Station Operators."

Voyenno-Meditsinskiy Zhurnal, No. 6, 1961: p. 74-82

BILYASHEVSKIY, M.M. [Biliashva'kyi, M.M.], doktor tekhn.nauk; OLIYNIK,
O.Ya. [Oliinyk, O.IA.], kand.tekhn.nauk; TKACHENKO, V.O., inzh.

Testing the work of a seepage preventing curtain of a reservoir shore.
Visti Inst.gidrol.i gidr.AN URSR 18:93-102 '61. (MIRA 15:3)
(Seepage) (Reservoirs) -

TKACHENKO, V.P., inzhener.

[Construction and servicing of mechanical looms with underpick motion] Ustroistvo i obsluzhivanie mekhanicheskikh tkatskikh stankov (s nizhnim boem). Moskva, Gos. nauchno-tekhn. izd-vo legkoi promyshl., 1949. 146 p. (MLRA 7:7)
(Looms)

TKACHENKO, Vladimir Stepanovich; SHLEPINA, M.M., redaktor; RAKOV, S.I.,
tekhnicheskiiy redaktor

[A shepherd's experience] Iz opyta chabana. [Moskva] Izd-vo
VTsSPS Profizdat, 1956. 38 p. (MLRA 10:3)

1. Chaban ordena "Znak Pocheta" plemennogo ovtsesovkhoza "Krasnyy
chaban", Kalanchakskogo rayona, Khersonskoy oblasti.
(Sheep)

BILYK, G.I. [Bilyk, H.I.]; TKACHENKO, V.S.

Grindelia squarrosa (Pursh.) Dunal. in the floodlands of the Northern
Donets River. Ukr. bot. zhur. 20 no.4:108-110 '63. (MIRA 17:4)

1. Institut botaniki AN UkrSSR, otdel geobotaniki.

TEACHENKO, V.S.

Reorganize production records and control. Sakh.prom. 28 no.7:6 '54.
(MLRA 8:1)

1. Smelyanskiy sakharany zavod.
(Sugar industry)

TITORENKO, N.Ye., kand.tekhn.nauk; SLAVIN, V.A., inzh.; TKACHENKO, V.S.,
inzh.

In support of very rapid utilization of the planned capacities of
large-panel housing construction plants. Transp. stroi. 11 no.10:
34-38 0 '61. (MIRA 14:10)

(Precast concrete)

TKACHENKO, V.S.

Chemical removal of scale from juice heaters. Sakh. prom.
36 no.7:54-55 J1 '62. (MIRA 17:1)

1. Ust'-Labinskiy sakharanyy zavod.

RUBANIK, V.G.; KORNEYCHIK, Zh.N.; MEL'NIK, A.F.; SOLONINOVA, I.N.;
ZHERONKINA, T.A.; KALUGIN, E.S.; TKACHENKO, V.S.; BESSCHETNOV,
P.P.; PROTASOV, A.N.; PARAVYAN, A.V., doktor biol. nauk, otv.
red.

[List of trees and shrubs recommended for landscaping in
populated places of Kazakhstan] Spisok derev'ev i kustarni-
kov, rekomenduemykh dlia ozeleneniia naselennykh punktov Ka-
zakhstana. Alma-Ata, Izd-vo AN KazSSR, 1963. 85 p.

(MIRA 17:3)

1. Akademiya nauk Kazakhskoy SSR. Institut botaniki. 2. Glav-
noye upravleniya lesnogo khozyaystva i okhrany lesa Soveta
Ministrov Kazakhskoy SSR (for Tkachenko). 3. Kazakhskiy
sel'skokhozyaystvennyy institut (for Besschetnov, Protasov).

TKACHENKO, V.V., tekhnik

Roller for performing roofing work in winter time. Transp.
stroika 15 no.3:50 Mr '65. (MIRA 18:11)

TKACHENKO, V.V., kand. tekhn. nauk

Quality, reliability, and durability of industrial articles.
Standartizatsiia 29 no.5:1-3 My '65. (MIRA 19:1)

1. Zamestitel' predsedatelya Gosudarstvennogo komiteta standartov,
mer i izmeritel'nykh priborov SSSR.

TRACHEINCO, V. V.

Machinery - Standards

Standardization of machine building. Vest. mash. 31, No. 12, 1951.

9. Monthly List of Russian Accessions, Library of Congress, September 195~~3~~⁴/2 Uncl.

TKACHENKO, V.V.

On the committee of standards, measures, and measuring instruments.
Standartizatsiia no.5:3-7 S-O '54. (MIRA 8:2)
(Weights and measure—Standards)(Measuring instruments—
Standards) (Standartization)

TKACHENKO, V.V., kandidat tekhnicheskikh nauk.

The Leningrad conference on standardization and normalization in machine construction. Standartizatsiia no.3:63-67 My-Je '54. (MLRA 7:6)

1. Upravleniye po standartizatsii. (Machinery--Standards)

TKACHENKO, V.V., kandidat tekhnicheskikh nauk.

Tasks of standardization in the sixth five-year plan. Standarti-
zatsiia no.2:3-6 Mr-Ap '56. (MLHA 9:5)
(Agricultural machinery--Standards)

TKACHENKO, V.V., kandidat tekhnicheskikh nauk.

General introduction of preferred numbers. Standartizatsiia
no.4:3-6 JI-Ag '56. (MIRA 9:11)

1 Komitet standartov, mer i izmeritel'nykh priborov.
(Simplification in industry) (Standardization)

TKACHENKO, V.

The Soviet socialist system is truly that of the people

1. Russia - Pol. & Govt. - 1917 -

Tkachenko, V.

Technical progress and standardization. p. 121. NORMALISACE.
(Urad pro normalisa) Praha. Vol. 5, no. 6, June 1956.

Source: EEAL LC Vol. 5, No. 10 Oct. 1956

~~ZABELIN, B. M.~~ TKACHENKO, V. V.

Increasing Labor Productivity in Machine Building, Moscow, 1957, 511 pp. 168

COVERAGE: This collection contains articles presenting a comparative technical and economic analysis of the most effective methods and industrial processes for obtaining high labor productivity in all stages of machine building. It is claimed that the output of the heavy industries may be stepped up by further standardization of machine tools, materials, and production methods, as well as by drawing on unused potentials. These articles cover all stages of planning and production as performed in most of the modern plants in the USSR. On the basis of actual experience, some new methods and approaches are discussed. The topics are listed in the table of contents.

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ТКАЧЕНКО, В. В.

AUTHOR: Tkachenko, V.V., Candidate of Technical Sciences 28-1-1/42

TITLE: Statewide Standardization in 1957 (Gosudarstvennaya standartizatsiya v 1957 godu)

PERIODICAL: Standartizatsiya, # 1, Jan-Feb 1957, p 3-8 (USSR)

ABSTRACT: During 1956, prerequisites were created for production of standard machine parts in specialized plants. The standard "ГОСТ 8032-56" for preference number series (statistical mathematics) was approved. This standard largely pre-determines standardization of parameters and, particularly, of dimensions. For the first time standards have been established in the USSR for bent steel profiles and for reduced-weight rolled steel profiles. Altogether, 780 standards were approved. As examples of these the following are mentioned: parameters of hydraulic presses and gear-shaping machine tools, steel grades, synthetic solidol (lubricant), consumer standards for coal, forging equipment. Together with those in force before 1956, there are now 1500 established standards. During 1955-56, a number of ministries for machinebuilding commissioned the leading research and design institutions of the respective branches as basic centers for standardization, regardless of their administrative affiliations. The following items are planned for

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Statewide Standardization in 1957

28-1-1/42

standardization in 1957: high-productive steel stamping machines, in particular the types and the basic parameters of dual-crank cold stamping presses and automatic multi-spindle sheet-stamping presses; hydraulic presses for three-dimensional stamping; parameters of sand-preparing and cleaning equipment as mixing mills, sand breakers, shot-peening heads, as well as characteristics for die-castings (this is the task for the Research Institute for Foundry Machinery); automobile engine series with similar dimensions; series of agricultural machines corresponding to the conditions of climate and soil in the various regions of the USSR, including hydraulic mechanisms used to operate these machines from tractors (All-Union standard); assortments of round, square, strip, hexagon, band, and rivet steel, and tubes of all kinds; dimension tolerances for cold-stamped and bent parts, in order to obtain maximum metal economy in production of high-precision parts (these standards will complete the already existing system of tolerances for cold forgings and stampings); rubber sealers, which will replace felt; revision of old and development of new standards for machine tool parts, as spindle noses, centers, square magnetic and electromagnetic plates, generally applicable fixtures; drop-forging dies and parts of cold stamping dies for production of afore-

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Statewide Standardization in 1957

28-1-1/42

mentioned machine tool parts; chemical and oil industry apparatus and vessel capacity and dimensions; parts of drilling equipment; hydraulic drives for roadbuilding machinery; revision of spline and key connection standards to conform to international standards; revision of standards for fuels of high-speed diesel engines in order to improve the quality and to reduce their corrosiveness; new grades of typographic and offset paper; new and higher requirements for radio sets and basic requirements for television sets; standards for new synthetic fibers, as "anid", cuprammonium rayon and caprone rayon; automation equipment such as radio-measuring instruments, lamp voltmeters, signal generators, input, output and connection characteristics of "AYC" automatic devices, to simplify and extend their use in various technological systems; resistance thermometers; radiation pyrometers; liquid and gas meters; scales; instrument parts, such as springs, jewels, small gears; standard quality test methods. The preference number series will be widely applied in 1957 in machinebuilding as well as in other industries, and this will serve to start coordination of different product characteristics and dimensions, with resulting interchangeability of parts, and components produced with standard fits and tolerances. The author emphasizes that nationwide standardization can only be

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Statewide Standardization in 1957

28-1-1/42

effective if carried out by administrative institutions and industrial plants, and states that some ministries underestimate the importance of standardization. One such example is the Ministry for Electrical Engineering, where the nomenclature of products and parts produced by the plants has reached tremendous numbers. The contacts abroad and the participation in international standardization work will be continued in 1957. The work planned for 1957 by the International Standard Organization (ISO) Technical Committees is cited. With the reorganized administration brought near to production, standardization will be further intensified, as one of the major bonds between economic regions.

AVAILABLE: Library of Congress

Card 4/4

Tkachenko, V.V.

28-3-1/33

AUTHOR: Tkachenko, V.V., Candidate of Technical Sciences

TITLE: Reorganization of the Industry and Building Administration, and the Tasks in the Field of Standardization (Perestroyka upravleniya promyshlennost'yu i stroitel'stvom i zadachi v oblasti standartizatsii)

PERIODICAL: Standartizatsiya, 1957, # 3, May-June, p 3-6 (USSR)

ABSTRACT: The article deals with the outlines of the future work of standardizing organizations after the functions of the central state ministries have been passed over to the Sovnarkhozes of the Republics, in accordance with the decisions of the 7th session of the Supreme Soviet. The tasks of the Sovnarkhozes and of the central organizations are broadly discussed and the importance of interchangeability is stressed. In the past years, the leading research institutes, plants and designing bureaus of separate branches had the function of basic standardization. Now, this will have to be carried on, and the importance of the Sovnarkhozes will increase. This does not mean that the plant standardizing sections have to be closed down, as some shortsighted administrators are doing. The de-

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28-3-1/33

Reorganization of the Industry and Building Administration, and the Tasks
in the Field of Standardization

partments for standardization and technical specifications of each republic's Gosplans will coordinate and direct the standardization work of their Sovnarkhozes, and they will scrutinize and develop for approval such technical specifications which are particularly important and obligatory for all enterprises within the scope of a Sovnarkhoz. The Central Soviet of the Scientific-Technical Societies decided to activate the work of all branch Societies and to extend their participation in setting up and discussing plans and projects of standards. The Committee of Standards, Measures and Measuring Devices - which leads in standardization matters - will have to extend its participation in coordinating, directing, and particularly in establishing standardization methods. It will have to take over the planning and, partly, the development of interbranch norms (for general machinebuilding) for parts and components which are common to many machinebuilding branches. The multi-lateral contacts of the Committee with the Sovnarkhozes, institutes and enterprises obviously will complicate the work, but will benefit the results.

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28-3-1/33

• Reorganization of the Industry and Building Administration, and the Tasks
in the Field of Standardization

• ASSOCIATION: Committee of Standards, Measures and Measuring Devices
(Komitet standartov, mer i izmeritel'nykh priborov)

AVAILABLE: Library of Congress

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IRACHENISO, V V

PHASE I BOOK EXPLOITATION

1213

USSR. Komitet standartov, mer i izmeritel'nykh priborov

Materialy 2-go i 3-go soveshchaniy po standartizatsii i normalizatsii v mashinostroyeni (Materials of the Second [Dec. 1956] and Third [May 1957] Conferences on Standardization and Normalization in Machine Building) Moscow, Standartgiz, 1958. 135 p. 2,000 copies printed.

Resp. Ed.: Krynkin, K.M.; Ed. of Publishing House: Rozova, L.V.; Tech. Ed.: Matveyeva, A.Ye.

PURPOSE: This collection of articles is intended for designers and engineering specialists.

COVERAGE: The book contains abbreviated versions of lectures given during the 2nd and 3rd Scientific Methodology Conferences held in December 1956 and May 1957 respectively. The first part of the book reviews the significance of introducing into Soviet engineering practices a system of preferred numbers based on recommendation of the International Standards Organization (ISO). The second part of the book generalizes on the experimental studies of standardization and unification conducted by various machinery-manufacturing branches

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Materials of the Second (Cont.)

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of Soviet industry. No personalities are mentioned. There are no references.

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ANCE IN ESTABLISHING RATIONAL PARAMETERS AND DIMENSIONS
OF MACHINES, EQUIPMENT, AND TOOLS

Tkachenko, V.V., Candidate of Technical Sciences. Sets of Preferred numbers 5

Sum-Shik, M.R., Engineer. Application of Series of Preferred Numbers in
Machine-tool Manufacturing

13

Vaksman, A.V., Candidate of Technical Sciences. New Dimensional Series
of Milling Cutters Established in Conformance With Number of Machine-
tool Revolutions

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PART II. EXPERIMENTS WITH STANDARDIZATION AND
UNIFICATION OF BASIC PARAMETERS OF MACHINES AND
EQUIPMENT

Card 2/3

TKACHENKO, V.V.

KOKHTEV, Aleksandr Andreyevich; RYBKIN, A.P., prof., retsenzent; TKACHENKO, V.V., kand. tekhn. nauk, retsenzent; RUSEVICH, I.M., inzh., red.;
MODEL', B.I. tekhn. red.

[Engineering and economic principles of standardization in the
machinery industry] Tekhniko-ekonomicheskie printsipy standarti-
zatsii v mashinstroenii. Moskva, Gos. nauchno-tekhn. izd-vo
mashinostroit. lit-ry, 1958. 417 p. (MIRA 11:7)
(Machinery industry--Standards)

SOV/28-58-6-1/34

: AUTHOR: Tkachenko, V.V., Candidate of Technical Sciences

TITLE: Standardization and Normalization Should Be Used
for the Seven-Year Plan (Standartizatsiyu i nor-
malizatsiyu - na sluzhbu semiletnemu planu)

PERIODICAL: Standartizatsiya, 1958, Nr 6, pp 3-7 (USSR)

ABSTRACT: The author states that the main task is to uti-
lize all the advantages and effectiveness of
standardization for the further development of
new techniques in various branches of industry
and for introducing complex mechanization and
automation into new fields. He stresses the ne-
cessity of a speedy working out of standards for
new grades of steels and alloys, synthetic mater-
ials, plastic, high-quality fuels and oils; in
particular those used in supersonic aircraft en-
gines, machinery and equipment for power engin-
eering, machine-building and chemical industries,
radioparts, electronic and semi-conductor devices,

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SOV/28-58-6-1/34

Standardization and Normalization Should Be Used for the Seven-Year Plan

automatic registering devices, etc. During the next three years, unified standards for machine parts and units used in machine building, must be worked out. In order to accomplish this task, the VNIINMASH (All-Union Scientific-Research Institute for Normalization in Machine Building) was established in 1958. The work of co-ordinating and planning research on standardization and normalization will be carried out by the Committee of Standards, Measures and Measuring Devices of the USSR Council of Ministers.

ASSOCIATION: Komitet standartov, mer i izmeritel'nykh priborov
(Committee of Standards, Measures and Measuring Devices)

Card 2/2

Tkachenko, V.

Standardization and normalization in the service of the Seven-Year Plan. p. 110.

STANDARDIZAREA. Comisiunea de Standardizare. Bucuresti, Romania
Vol. 11, no. 3, Mar. 1959

Monthly List of East European Acquisitions (EEA) LC, Vol. 8, no. 9, Sept. 1959

Uncl.

TKACHENKO, V.V., otv.red.; MATVEYEVA, A.Ye., tekhn.red.

[Catalog of State standards for 1959; in effect as of January 1, 1959] Ukazatel' gosudarstvennykh standartov 1959 (po sostoianiiu na 1/1 1959 g.). Izd.ofitsial'noe. Moskva, Standartgiz., 1959. 520 p. (MIRA 12:5)

1. Russia (1923- U.S.S.R.) Vsesoyuznyy komitet standartov. (Standards, Engineering)

TKACHENKO, V.V.

0.2

28(5)

SOV/28-59-12-2/27

AUTHOR: None given

TITLE: Seminar "The Normalization⁴ and Specialization on
Parts in Machine-Building".*

PERIODICAL: Standartizatsiya, 1959, Nr 12, pp 7-15 (USSR)

ABSTRACT: The seminar was organized by the Moskovskiy dom
nauchno-tekhnicheskoy propagandy im. Dzerzhinskogo
(The Moscow House of Scientific and Technical Pro-
paganda imeni Dzerzhinskiy) and Komitet standartov,
mer i izmeritel'nykh priborov (The Committee of Stan-
dards, Measures and Measuring Devices). The purpose was
to generalize the experience of sovnarkhozes, industry,
and research institutes in specialization and coopera-
tion in the machine-building industry and to convey
this experience to the industry technicians. More than
300 delegates from organizations and plants were pre-
sent and 18 reports were read on the problems of spe-
cialization and cooperation of the plants and the nor-

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SOV/28-59-12-2/27

Seminar "The Normalization and Specialization on Parts in Machine-Building".

malization of the most important machine component units and parts. The article briefly gives the contents of several reports. In the report by V.V. Tkachenko "On the Part of Standardization and Normalization in the Progress of Specialization and Cooperation in the Industry", it was said that about 250 standards for types and basic parameters of machines, apparatus and instruments are already in force and 200 more will be worked out in the course of several years. The parametrical standards will unify the machine components and create the prerequisites for the organization of specialized production. There exist three basic normalization trends: 1) General normalization i.e. of parts and component units of general use and of technologic equipment common for different industry branches; 2) Branch normalization, i.e. of equipment specific for separate industry branches; and 3) Plant (local) normalization

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SOV/28-59-12-2/27

Seminar "The Normalization and Specialization on Parts in Machine-Building".

limiting the number of types, dimensions and technical documents within single plants. Much work is yet ahead in the standardization of production process control systems, units and measuring components (pick-ups, transmitters, and servomechanisms). The extensive use of radio and electronic parts requires standardization of semiconductor diodes and triodes, resistances, small synthetic material capacitors, and miniature electronic tubes. Centralized production can be recommended for the following: 1) Torque transmitting parts and units (reducers, gears, keys, shafts, clutches, etc.); 2) Fasteners; 3) Pipe fittings, hydraulic and pneumatic drives and lubrication equipment; 4) Regulating equipment (brakes, springs); 5) Electric switches, protective devices, starters; 6) Radio equipment (capacitors, resistors, panels, transformers,

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Seminar "The Normalization and Specialization on Parts in Machine-Building".

SOV/28-59-12-2/27

electrovacuum tubes, etc.); 7) Instrument parts beginning with sensitive elements and ending with casings. The report by L.V. Kuznetsov, "The Tasks and the Most Important Work in the Field of Normalization of Machine Parts and Component Units", included the following facts. The specialization level in machine-building is still low. Only the most widely used standard tools are produced basically at specialized plants, but attachments, dies and other technological equipment are produced by every machine-building plant. The making of clutches, bearings and other common parts is not specialized. The goals set by the Seven-Year-Plan require standardized technical documents - "normali" they are a prerequisite of specialized production and cooperation. The development of the "mashinostroitel'-nyye normali" (or "MN") (machine-building standards) was organized in 1958 for the first time by the Committee

Card 4/14

TKACHENKO, V.V., otv.red.; KASHIRIN, A.G., tekhn.red.

[Index to state standards in 1960; as of January 1, 1960.
Official edition] Ukazatel' gosudarstvennykh standartov 1960;
po sostoiianiiu na 1/I 1960 g. Izd.ofitsial'noe. Moskva, 1960.
528 p. (MIRA 13:7)

1. Russia (1923- U.S.S.R.) Vsesoyuznyy komitet standartov.
(Standards, Engineering)

S/028/60/000/011/001/007
B020/B058

AUTHOR: Tkachenko, V. V.

TITLE: Trend of Standardization in 1961

PERIODICAL: Standartizatsiya, 1960, No. 11, pp. 3-6

TEXT: In 1961 more than 400 scientific research institutes, design offices, and establishments will participate in standardization which is directed toward the solution of the most important tasks of national economy, set by the June (1959) and July (1960) Plenums of the Central Committee of the CPSU. More than 1400 items, including those spreading into 1961, are contained in the standardization plan of 1961 approved by the Komitet standartov, mer i izmeritel'nykh priborov pri Sovete Ministrov SSSR (Committee on Standards, Measures, and Measuring Instruments at the Council of Ministers USSR). More than 65% of the items deal with the introduction of a new technology, and only 500 with the checkup of valid standards. More than half of them refer to machine and instrument construction, the main problem being the elaboration of standard parameters for machines, and other equipment. An important task devolves upon the Tsentral'nyy nauchno-issledovatel'skiy institut Chernoy metallurgii

Card 1/2

Trend of Standardization in 1961

3/028/60/000/011/001/007
B020/B058

(Central Scientific Research Institute of Ferrous Metallurgy). Demands made upon the following institutions are dealt with next: Ukrainskiy trubnyy institut (Ukrainian Institute for Tubes), Institute Giprotsvetmetobrabotka, Instituty Gosudarstvennogo komiteta Soveta Ministrov SSSR po khimii (Institutes of the State Committee on Chemistry of the Council of Ministers USSR), NIIKhIMMASH (Nauchno-issledovatel'skiy institut khimicheskogo mashinostroyeniya (Scientific Research Institute of Chemical Machinery)), UkrNIIKhIMMASH (Ukrainskiy nauchno-issledovatel'skiy institut khimicheskogo mashinostroyeniya (Ukrainian Scientific Research Institute of Chemical Machinery)), Giproneftemash, Byuro vzaimozamenyayemosti v metalloobrabatyvayushchey promyshlennosti (Bureau for the Exchange of Experience in the Metalworking Industry), NIIteplopribor, Tsentral'nyy nauchno-issledovatel'skiy institut kompleksnoy avtomatizatsii (Central Scientific Research Institute of Comprehensive Automation) and its SKBSN.

Card 2/2

TKACHENKO, V.V., otv. red.; NEVSKAYA, V.N.; red. izd-va; KASHIRIN,
A.G., tekhn. red.

[Index of state standards as of January 1, 1962] Ukazatel' gosudarstvennykh standartov, 1962. (po sostoiانيu na 1/1 1962 g.)
Izd. ofitsial'noe. Moskva, 1962. 575 p. (MIRA 15:12)
(Standardization)

TKACHENKO, V.V.

Further development of standardization. Standartizatsiia 26 no.1:
3-7 Ja '62. (MIRA 15:1)

(Standardization)